AR 9,5

MONSANTO SUPERFUND SITE

PUBLIC MEETING

On August 13, 1996 at 7:00 p.m. a public meeting was held concerning the Monsanto Superfund Site at the Soda Springs High School Auditorium. Misha Vakoc acted as the Meeting Moderator and background presentations were given by Bob Geddes, Tim Brincefield and Dean Pahl followed by a question and answer period and opportunity for public comment.

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PROCEEDINGS

MISHA VAKOC: I'd like to thank you all for coming this evening. My name is Misha Vakoc and I'm a community relations coordinator with the Environmental Protection Agency in Seattle Washington.

The purpose of our meeting this evening is to discuss the details of the EPA's proposal of the cleanup action at the Monsanto Superfund Site. We'd like also to give the opportunity to answer any questions that you may have and to actually take your comments this evening on both the proposed plan that we'll discuss and all the alternatives that were evaluated and looked at as we developed this plan.

The Superfund process began in the late 80's for the Monsanto Site and in 1990 EPA approved the Site for moving onto the national priorities list, thus beginning the Superfund process of essentially a study phase.

This first phase -- during this first phase both EPA and Monsanto did some extensive environmental sampling to determine both the type and the extent of the contamination of the Site. As well as to look at the human health and environmental

risks associated with that contamination.

We're now in the midst of what's considered the decision phase of the Superfund process where we've looked at the feasible options of the cleanup of that contamination and EPA has drafted this proposal for public consideration.

What we need tonight of course is your input on this plan to move ahead in the right direction.

The last phase of the Superfund process will be the actual cleanup itself, the cleanup actions as defined. And that will take place after all the public comments and concerns are addressed via a public document, a legal document called a Record of Decision.

Let's see. . . As I said we're currently about half way through the public comment period. The deadline for public comments on the proposed plan is August 30th.

I'd like to point out that there are a number of ways you can provide comments in these remaining two weeks to EPA. The first of course is you can comment verbally this evening, we have a court reporter here who will be transcribing the proceedings and the transcript of this meeting will

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become part of the administrative record.

The second way that you can comment is to actually write out your comments this evening if you choose not to stand up and speak tonight. We have some blue forms on the table in the foyer which are for your use if you would like to write out your comments and leave them here for us before you go.

The third way that you can comment if you would like to think about what you've heard tonight and if you think of something even after this meeting you can provide your comments by mailing them to our office in Seattle before August 3oth.

The blue form on the table is designed as a self-mailer so it's already got the address on there and you can use that form or write us a formal letter using the address that's printed out there.

Our agenda for this evening we'll start out first with a brief introduction by Bob Geddes from the Monsanto Chemical Corporation. That will be followed then by a discussion by Mr. Dean Pahl from the environmental consulting firm Montgomery Watson who will describe the remedial investigation process and just give us a brief summary of the remedial investigation.

Next up will be Tim Brincefield, the EPA

project manager for the Monsanto Site who will summarize the findings of the risk assessment both for human health and the environmental risks. These assessments were based on the results investigative remedial investigation.

Dean Pahl will then get up and provide yet another presentation on the various cleanup options that were examined for the Monsanto Site and the parameters that were used to evaluate those options.

And lastly Tim will join us again and discuss EPA's actual preferred cleanup options for the Site.

I'd also like to mention that we have with us this evening a representative from the Idaho Division of Environmental Quality. Mr. Gordon Brown is here so if there are questions for the State he will answer those.

I'd like to encourage you to ask questions at any point during the presentations or after each individual presentation and also at the conclusion of the presentation we'll kind of ask again if there are any other additional questions. And then we'd like to open up, as you can see on your agenda that you may have picked up, that we'll open it up for formal public comment.

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I was just wondering if I could possibly get a show of hands for how many people are actually going to provide a statement this evening so I can get an idea. Any? At all?

Okay. We'll play that by ear. Two? Three? That's certainly a manageable number. I was going to ask that we would actually sign up if there were a number of people who actually wanted to comment but since there's as many as we are I think we can handle that without a formal sign-up.

And one last thing I would like to ask that you introduce yourself as you comment this evening for the benefit of our court reporter and the transcript that will be made.

Yes?

UNIDENTIFIED SPEAKER: There a couple of ladies here that are a little hard of hearing. Could you speak up a little bit and would the presenters also?

MISHA VAKOC: Certainly.

Is this loud enough for you?

TIM BRINCEFIELD: There are also some lovely seats in the front two rows here that are going begging, just like church.

MISHA VAKOC: If you're having problems

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please just let us know and we will speak louder.

TIM BRINCEFIELD: We can also get a microphone if it turns out that just talking is not enough.

MISHA VAKOC: So does anybody have any other questions before we begin this evening?

Okay. With that I'd like to ask Mr. Geddes to start us off, please.

BOB GEDDES: Thank you, Misha. I'll try to talk loud enough, if I'm not talking loud enough just raise your hand and I'll try a little harder.

My name is Bob Geddes, I work for Monsanto Company. I am the project coordinator for the Superfund activity and I've functioned in that position for the past six years.

What I'd like to do before we turn the time over to more formal presentation is introduce some of the members of our team who have worked very hard over the last six years to characterize the plant site. And I'm even going to indulge a little bit and ask them to stand up as I introduce them.

Kent Lott is the technical engineering superintendent at the plant. Kent is my supervisor and has been very dedicated to make sure that I completed my assignments and roles.

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Pat Hyland. Pat is an environmental operations manager for Monsanto, he lives in St. Louis and he has responsibility for our facility.

Dale Wilson. Dale is a principal engineering specialist, he works for Monsanto and lives in St. Louis and works there but has provided me a tremendous amount of support as we have worked through this process.

Bill Wright. Bill works for Montgomery Watson Engineering, he has provided us technical support as we've conducted the risk investigation feasibility study. Bill is kind of an expert risk assessment person who has helped out a tremendous amount there.

Dean Pahl, who you will meet a little bit later, works for Montgomery Watson as well. He resides in Salt Lake City, works out of that office. He's the feasibility study project manager which we'll hear about a little bit later.

David Benton who many of you have met before, he's spent a lot of time in Soda Springs. He is our hydrogeologist who has helped us characterize the groundwater in the Soda Springs area, he was unable to be with us tonight.

And also Dan Hrebenyk who lives in

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Vancouver, Brittish Columbia, works for SENES Consultants. He helped us characterize the air pathway.

So that is the team of professionals that have worked on the Superfund Site for Monsanto's standpoint and helped and worked very diligently over the past six years to characterize and evaluate the conditions at the Soda Springs facility.

In my opinion I think we've assembled a world-class team. We have great professionals who have dedicated a lot of time and a lot of effort to do what I think is the very best job possible to define what the environmental conditions are at the Monsanto Soda Springs Site.

Throughout the entire process Monsanto has tried to work very closely with EPA and the Idaho Division of Environmental Quality to make sure that all of the conditions and needs were met as we carried out the risk investigation and feasibility study.

What I would like to do before I turn the presentation over to Dean is provide a formal invitation for any of you who have concerns or questions to come and talk to us. We would love to share the information that we spent six years

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developing, we would love to tell you a little bit more about the environment that we all live in. And we would like to hopefully resolve any concerns that you may be feeling at this point in time.

So either tonight or after the meeting or give us a call, whatever is convenient for you please fell free to give me a call if I can't personally answer your questions I'll guarantee that part of this team can answer your question and we'll do our best to make sure that all of your concerns are addressed and the questions are answered.

So with that I'll turn the time to Dean Pahl.

DEAN PAHL: Thanks, Bob. Introduced twice. My name is Dean Pahl, I've been involved in this project for the last couple of years and help managed the project through the feasibility study which is the process of making decisions about what should be done based on the findings of the investigation.

This first portion I'm just going to very briefly go through the findings of the remedial investigation. I have copies of a number of the main documents up front so there's lots of things I won't remember and you can come up and talk with me later.

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There are also copies of all the documents in the library.

Just a quick history for the project. The project's really been going on for a long time, longer than anybody mentioned. Monsanto initiated investigations into potential environmental problems back in the 70's, installed groundwater monitoring wells.

And as over the years they started to find issues or problems they went ahead and tried to address them, I'll get into some details of that in a minute.

This process that we're discussing tonight, this Superfund process, began in 1987 when EPA conducted a site inspection of the plant. As a result of that inspection the Site was placed on the national priority list which is basically a list of sites around the country that are going to go through a process of investigation and decision whether actions are taken.

That began what's called a remedial investigation and feasibility study that ended this year and results in us having this proposed plan and this meeting.

It's a long list and I won't read it all

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and I hope folks in the back can see the print well enough? No? Yep.

Over the years Monsanto's done quite a few things before we come to this point of decision of what further actions, I've listed a number of them here.

As they've found problems they've closed facilities properly so that problems won't continue. They've changed practices in their operations over the years to try to address any problems that have been found.

Just to give a kind of overall idea in the this just a diagram of the Site. And the arrows are indicating how things could get from inside the plant, the potential problems, these are indicating main ones.

These little white arrows if you can see them down at the front end right here and here they're showing there were some facilities that were used in the past that the decision was made that they were probably effecting groundwater so those facilities were taken out of service and closed. And in fact all of the sources that affected groundwater within the plant have already been addressed.

And then this diagram is showing that

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there's air emissions that come out of the plant. There's also as every one knows looking at the plant there are a number of piles, I'll use the term stockpiles as we talk about it, of material that are intermediate by-products in the process of the plant.

Wind can blow some dust off of that and in fact that's the source of what effect there's been to the soils outside the plant. I'll leave that up and I'm happy to come back and questions about that.

So in overview I'm going to talk about three more things. One is the potential sources that were investigated, the second is how and what kind of numbers of samples were collected and evaluated and last I'm going to summarize the findings from the remedial investigation.

Again a long list and basically this list represents all of the materials that are within the plant were looked at and tested, sampled and tested to see if they might have contributed any problems outside the plant site.

Also the facilities within the plant that might have affected groundwater are on this list. Everything on this list was investigated as part of the remedial investigation.

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Again I'm going through real quickly just giving a summary. For soils there were 72 locations outside surrounding the plant where some locations one and other locations up to five samples were taken trying to determine if there were any problems that were effects from the plant and how deep they might have affected the soil.

For groundwater over the years between 50 and 60 monitoring wells were installed in the area around the plant and within the plant and the springs surrounding the plant all of those were sampled numerous times over the years and sampling has been happening even today.

For air, all the available air monitoring data was pulled together, evaluated and a model was created to try and determine what the effects off-site from air emissions of the plant were.

And with surface water and sediments the Soda Creek and all the way down to Alexandar Reservoir were sampled both for the water and the sediments at the bottom of the creek to see what effects there might be. And in the case of the sediments there was testing done on tiny critters in the sediment to see if there was an effect on animals living there.

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I'm going to end this portion, although I'm happy to take questions, with a summary of the findings.

For groundwater there was found to be some effect outside the plant primarily just south of the plant. Let me give you an idea of where. This is the plant, this is the property adjacent and this are parcels of land that Monsanto has purchased but isn't using for plant activities.

And on this figure the yellow outline around here and up at the top, those are the areas where there's been soil that's been affected. And the other colors, as are indicated in the legend up at the top, are effects to groundwater.

For groundwater several constituents have been studied, florae, cadmium, selenium and nitrates were detected above primary drinking water standards and manganese was detected above a secondary drinking water standard in the plant itself and within the plant.

For soil the major constituent of concern was radium 226 which was found at slightly elevated levels in the yellow area around the plant that I indicated. And for air, surface water and sediments there were no findings of any effects that required

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any further action.

If anybody has a question right now or I could take them later I know this was a quick summary.

Tim?

TIM BRINCEFIELD: Hello, some of you may remember me I am Tim Brincefield. I've been the EPA project manager now for five years on this and been here a couple of times before to try to present the initial findings of the remedial investigation and the risk assessment as we did them.

And now that we're to the end of the process this is EPA's public meeting to try to get your comments on the proposals in front of you. Monsanto and their consultants have been kind enough to give us some summary of some of the investigation work that they've been doing under oversight of the EPA and the State.

Building on the studies that were done by Monsanto of the nature and extent of constituents around the facility and at the plant EPA then did a risk assessment. And a risk assessment as it says here is an evaluation of potential risks to human health and the environment in the absence of any cleanup action or further action.

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We understand Monsanto has taken action to address a number of things, this is an effort to do an assessment of what would be the risks in the event no further action were taken. And it will provide a basis, the risk assessment provides a basis for our decision of whether or not to consider whether cleanup is necessary and may be used to help set cleanup levels.

We did separate assessments on risks to human health and the environment. And taking a moment to try to help explain when EPA says it estimates risks, risks that we talk about means that we found that there's a chemical or a constituent that causes potential harm and that someone, a person or the environment some other critter, is exposed to that.

And if there is a hazard or a couple of concerns and there's an exposure, I drink the contaminated water, then there's a risk associated with that.

If the water is contaminated and no one is drinking it then we don't say that there's a risk in the current situation because we don't have both the hazard, the chemical in the water, and the exposure, someone actually drinking it.

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So we took the information that Monsanto had collected about -- and I've taken groundwater here for example and to explain the red outline here outlines the plant boundary and other property owned by Monsanto and in green is a rough estimate. And there's a lot of other detail on here from the reports, if you could just kind of focus I'm trying to use this to illustrate it and we can go into the details.

But it basically shows the extent of contaminated groundwater relative to underneath and relative to the facility. And with that information we then look at the question of who could potentially be exposed to this or who is exposed to it.

And in the case of the water the finding was that there is no current risks since there's no one currently drinking the affected water, there are no drinking water wells in the affected areas and the City of Soda Springs drinking water supplies come from a separate source that are unaffected and should remain unaffected.

Plant drinking water supplies come from a well that is uncontaminated, unaffected by the Site and therefore the conclusion was there is no current risk.

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However, we also concluded that there would potentially be an unacceptable risk should someone put a drinking water well in the affected area to the south. So no one currently at risk but there's a potential because the contaminates in the groundwater that there's unacceptable risks and I'll talk a little bit more about that in a moment.

Similarly we evaluated current potential risks with respect to the soils and solid sources. And there we looked again -- I said we needed to be concerned about a potential hazard and then is someone exposed.

Within the facility primarily it would be workers that we would think of would be potentially exposed, nobody lives there. Even if someone visits there occasionally to work they're not there very often. So it's workers are the people that we looked at potential risks to within the plant.

And then looking at the surrounding soils in areas surrounding the plant we considered potential risks to workers because we have some businesses and industrial areas adjacent to the facility and we looked at risks to potential residents.

Again this is a rough representation of

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the facility in red and plant owned property owned by Monsanto and the blue line outlines the extent of soil contamination that we're proposing to address in this plan.

The other details on the map, again all those little black dots are sample locations. You can see we sampled an area, they sampled an area that was wider than we were identifying as being a potential concern. Those areas were found to be lesser levels and not pose an unacceptable risk.

But we then looked at who could be exposed to these soils as I said within the plant and outside here we looked at potential residential exposure because there are no residences within these areas at this time. And we also look at potential worker exposure.

The current risks to workers, again we looked at soils and sources within the plant, we found the current risks to workers were within Superfund's acceptable risk range.

And when I say that term acceptable means things different to different people. In order to help guide people like myself in making decisions in this process as part of the risk assessment for example if we're looking at potential risks of

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cancer, which would be the concern with respect to radium, it's in a range that risks that are very, very small, below one in a million, are considered acceptable. If the risk is that low or much lower we don't even consider taking further action.

If risks, actual or potential, are somewhat higher than that then we may consider the need for action. So in this case we're saying the risks to workers are well below that range that we would consider taking action.

And this is in part because Monsanto has active worker health and safety programs in place that help reduce that. Their workers are monitored and they've got safety programs and they have good controls.

We also found again looking at potential risks that uncontrolled exposure within the plant could pose an unacceptable risk. If people were there unprotected eight hours a day and there were not the controls that Monsanto has in place now that could potentially pose unacceptable risks.

The other areas that we looked at was in soil surrounding the plant and there we looked at current risks to workers were within the acceptable range. Workers are not there as often as we assumed

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residents would be and by not being there as frequently the lesser levels we find do not seem to pose a risk to workers. And there are no residents there so we say current risks are within the acceptable range.

Since no one lives there though but someone could. At the moment there is no prohibition, nothing that would prevent someone from deciding -- but there is no prohibition in place that would prevent someone from building a home in the contaminated areas adjacent to the facility and that could pose an unacceptable risk.

Other agricultural uses, the crop set aside program, things like that we don't see any unacceptable risks associated with those uses. We just would be concerned in the event someone were to build a home and live in the most affected areas.

But at the risk of being totally redundant when we've done this process they've taken all these samples, we've looked at a lot of possibilities, we've narrowed it down in my presentation of what we've done to the areas that warranted further study and seem to require potentially taking action.

And those were possibility of exposure to contaminated groundwater, the possibility of

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residential exposure to contaminated soils surrounding the facility. Those risks are unacceptably high so EPA directed Monsanto to do an evaluation of alternatives that could address those potential risks to reduce those risks or cleanup the contamination to eliminate them.

Finally before I turn it over to Dean to talk a little bit about that study it's important, we made some other conclusions that I've already eluded to.

Just as we told them they should go forward and look at potential actions to deal with the potential groundwater risks and potential soils risks we determined that no action would be necessary and therefore there was no need to do a study of possible actions for sediments in Soda Creek, the surface water in Soda Creek, for the air again due to the lack of human health or environmental risks. So this procedure is good news.

In addition we made the judgment that there are some potential sources in the plant, the dust piles that were talked about, that are contributing to or appear to have contributed in the past at last to the off-site soil contamination.

So we did tell them as part of the

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feasibility study look at ways to reduce that problem to try to control those sources so that we no longer have the dust escaping from the plant.

And finally since continued operation by Monsanto is anticipated for the foreseeable future we made a decision that we didn't need to do a study of what potential actions to prevent those potential risks. And that's a slightly different decision than we made for the off-site soils.

We made that decision because as I say there is every reason to believe that Monsanto will continue to operate as they have, they are in compliance with environmental laws.

And if we made the decision and put it in this proposal we would then review every few years to make sure that that remains effective. But we didn't see any reason to go out and hypothetically come up with actions that might reduce the hypothetical risks when in fact they're going to continue to operate.

So those are some important decisions that we made about things that didn't need to be studied. And these are all decisions that you can comment on as part of this comment period.

With that I'm going to take a break now and hand it back and ask Dean to summarize a little

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bit the feasibility study evaluation done by Monsanto then I'll come back up and talk about EPA's ultimate evaluation of that work and the proposed plan for cleanup that we're putting out for discussion this evening. Thank you. Unless you have any questions now that would help before we go on?

Okay. Thank you then.

DEAN PAHL: I'll put that back up, although I'm not going to really refer to it much unless someone wants to have it there. And the areas are the same on the overhead Tim used as this one.

Now I'm going to summarize again as briefly as I can what we went through and the decisions that came out of the feasibility study. There's a little lingo associated with this so I'll try and help it make sense.

The feasibility study is basically looking at what things could you do that would be feasible that you could accomplish reducing the risks that were identified, I'm going to talk about four things.

Remedial action objectives is the lingo for what are the objectives, what are we trying to achieve. And the risk assessment essentially gives you the information as a first step to define the

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objectives very carefully so you can evaluate things.

Development of alternatives, essentially what you do in this kind of study is you look at every technology that's available whether it's proven and it's been used may times or it's brand new.

And we assemble them into what's called alternatives that will deal with all the remedial action objectives, the media that the risk assessment pointed to as being a concern. So each of the alternatives I'll talk about deal with each area of remaining concern.

Those alternatives are screened and then they're evaluated according to criteria that are established by law. And then at the end of that evaluation a preferred alternative is selected, the next step in the process which Tim will talk about next. The EPA takes that study and decides what's the proposed plan.

The remedial action objectives and summary, there are four. One is to control releases from the on-site stockpiles that could effect off-site soil and create unacceptable risks. The second is to prevent long-term exposure by persons to any soils that contain Radium 226 above the level

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that stands for 3.7 picocuries per gram of soil.

The third is to prevent drinking of groundwater that's been affected with constituents that exceed the drinking water standards, I named those earlier on.

And then last to restore groundwater to its most beneficial use. As I think Tim eluded to and let me take a minute with this slide as part of the remedial investigation modeling was done to determine if no further action is taken, with groundwater the actions that have already been taken have effectively addressed the sources, would the groundwater recover on its own.

And it was decided within the remedial investigation that in fact it would. And it depends on the constituent whether it ranges from 5 to 30 years that the groundwater will recover so the drinking water standards will not be exceeded.

This is just a summary of the process of coming up with remedial alternatives. We looked at many, many technologies and what are called process options to assemble alternatives that would address each of the remedial action objectives.

And part of that we developed and the document describes 44 potential remedial

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alternatives. They break down into eight basic classes of alternatives and each one of those evaluated across a range of different risk levels.

We'll spend a minute with these and I'm happy to take any questions, I know there's a lot of words here. This is a summary of those eight basic types of remedial alternatives that we considered.

The first is an alternative that says enough's been done, no further action is required. And that's actually required by law that you evaluate that as a baseline to compare all the others to.

The second was added because in some cases no further action may not be adequate and you need some continued monitoring of groundwater or soils to see if the problem is being addressed over time.

The third, and each one of these again addresses each of the different media that the risk assessment suggested were of concern, included dust controls for the on-site source materials. Essentially that's spraying material on the stockpiles that hardens and forms kind of a crust so that winds passing across won't blow things off-site.

I'm not going to -- that repeats for almost all except for one of the alternatives so

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won't keep repeating it.

Then there be groundwater monitoring and land-use restrictions for soil. The land-use restrictions are basically various kinds of things that could be done to assure that a home is never built within these areas. And you can see the areas are very close to the plant and I assume it's recognized there are no residents in any of those areas.

The fourth is similar to the one I just named and the difference is that it includes restrictions on groundwater use in addition to the restrictions on soil.

The 5th, again many of these are similar but it takes a different approach to soils, the affected soils, outside the plant. In this alternative what we looked at was planting crops that would pull up -- plant uptake would pull up into the plant the Radium 226. And then over several seasons those plants would be harvested and disposed of.

This is a technology that's actually been used quit a bit, it's always aimed at metals in soils. There's some things in the literature but there's not much proof of whether or not and which plants would work for Radium 226 but the track record

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says it's a good thing to consider.
And this alternative it included the proposal that there be a test done called a pilot study to evaluate whether or not it would ever work.
The next one is dust controls again. And in this case all the soils outside the plant would be dug up to a depth of six inches.
If this didn't come across most of this effect is very much on the surface, there's really essentially no effect below six inches and the largest portion of it is actually within the top inch. So in that case the soils would be dug up and disposed of.
In the seventh alternative instead of using dust control on the outside materials there would be soil placed over all these piles and they would be capped which would effectively be very difficult for Monsanto because it would affect -- those materials are used in the process.
And then the last one takes the off-site soils, removes them and reuses them within the plant.
All right. Up at the top of this I indicated this screening process looks at three criteria; effectiveness, implementability and cost to

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sort out which alternatives should be considered in real depth.
You can see the colors. The yellow ones, the ones I have a little yellow bullet next to are the ones that we determined should pass on and get more serious consideration in the next step.
And then I'm happy to come back and discuss this in more detail but the top define very quickly the criteria that are established for this process, I'll just kind of go through them very fast.
You evaluate all of the alternatives according to these -- well, there's actually nine of them. Is it protective of human health and the environment? Is it compliant with various standards that may be appropriate or relevant to the Site? Is it effective in the long term and is it effective in the short term or does it create risks that are unacceptable as it's being implemented?
The preference for treatment is that does the preference that whatever constituents are of concern their toxicity, their mobility, be reduced and the preference is by treatment.
Are they implementable? That is can you -- does it work but can you make it happen within

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a reasonable time frame. Cost and then State and community acceptance.
As part of the feasibility study we prepared we don't evaluate State and community acceptance once that's turned in EPA works with the State to determine what's acceptable to the State, this meeting and your comments and EPA's response to them is the way that community acceptance is evaluated. We don't take a guess at that.
So this is another summary of which alternatives passed through, they were the yellow ones on the last slide. And again we can come back and ask questions.
But basically from the feasibility study the one that I have yellow again the alternative that had dust controls for on-site materials, monitoring of groundwater and soils and land use restrictions that there not be residences placed in the affected soil areas and that the affected groundwater not be used for drinking water. That's the alternative that was preferred in the f.s.
So now Tim's going to get back up and talk about EPA's evaluation of that and the proposed plan.
TIM BRINCEFIELD: Thank you, Dean.

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Back to my high-tech presentation. In order to really address the areas we focused on most I've again kind of picked and chosen from the details of the studies and for simplicity sake I wanted to focus us in on two main things.
I told you we directed them to study what could be done about groundwater people are potentially effected by and the soils people are potentially effected by.
For groundwater primarily looked at no action, monitoring only and groundwater use restrictions and monitoring. An example of the use restrictions would be a temporary ban on drinking water wells during the period of time the 5 to 30 year projection that it took for drinking water to recover.
As I said before we did not consider active cleanup of the groundwater for the reasons Dean explained, it appears that it will recover in a period of 5 to 30 years. The concentrations are low enough that it would be extremely expensive and difficult to justify as being effective to go in and treat it and try to have a better result. So we really did not evaluate that in detail.
And of these three alternatives that were

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evaluated only the last one, the groundwater use restrictions meets the EPA criteria for protectiveness and therefore that's the only one of the alternatives that we can recommend and that is what we recommend and I'll speak about that in a moment.

For soils as it says it really came down to looking at four alternatives for what you could do about the soils surrounding the facility. We have to look at no action required under the law, that would not be protective in the event of a potentiality of someone trying to build a home there.

So for EPA's standpoint of having to recommend a protective alternative we end up focussing on the remaining three primarily.

The land use restrictions to reduce potential residential exposure risks. Those would allow current land uses to continue but would restrict the land use to preclude residential use of the affected areas, those areas surrounding the facility that have been shown to be effected. And the total cost would be up to about 2.5 million dollars over 30 years of establishing controls, doing the continued monitoring and assessment that will be done on this project.

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The second main alternative, the treatment by plant-uptake. There if successful that would be a permanent way of cleaning up or addressing the soils.

And it was projected that if successful could take about seven years to implement but we wouldn't know for sure until we did a test study to find out whether that could really be done successfully on local soils and for these contaminates but that's the projection.

And the projection is that that would take -- cost about 4.5 million dollars and it has worked at other sites for metals, it has not been shown to work for the radioactive particles of concern here but it is a possibility.

And the third main possibility that would be protective would be the excavation of contaminated soils off-site and disposal within the plant. This would reduce and eliminate the risks of potential residential exposure in the surrounding soils and would therefore not require that there be any restrictions on the use of those soils.

It could however disrupt the area, going out and scraping six inches of soil would disrupt any vegetation that's there now and possibly other uses.

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And the projected cost if the entire effected area that was looked at, actually the estimate was a little larger than this because we considered cleaning up to a little more stringent level possibly, would be up to 16 million dollars, not a small amount of money.

So those were kind of some of the Maine considerations that we weighed in trying to recommend a proposed plan. And what we ended up doing was not agreeing completely and precisely with the preferred alternative in the proposed feasibility study. Instead we have in our judgment kind of picked and chosen a little bit from the various pieces to assemble a plan that we think makes the most sense to address the issues of concern here.

And it's a combination of a couple of things. As I said before, no further action -- and Dean even talked about dust controls as one of the things we're recommending. In fact Monsanto has been proactive and has already put the dust control actions in place and they appear to be successful.

And therefore our recommendation is that we don't need to require them to do that again we instead can state that it appears no further action is necessary. We would however be able to do

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periodic sampling to make sure that we've made the correct judgment there.

In addition no action for sediment surface water and air as described earlier.

As I already said pretty much the proposed plan for groundwater no further action necessary to control sources, those have already been dealt with and there would be monitoring to make sure that this has been the case.

And we are proposing that there should be use restrictions on affected areas to prevent human exposure to contaminated groundwater, such as a temporary ban on drinking water wells in the affected area.

And then the final component as I explained is for soils. We recommend, as the feasibility study did, that we think that the alternative that offers the best balance of protectiveness and recognizing what current uses are and potential uses are would be in fact to ask landowners to put use restrictions on their property by therefore agreeing that there would never be residential development of the affected areas, not necessarily someone's entire property but any affected areas.

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As a contingency because there has been some concern that it might not be possible to get use restrictions established, someone might not agree to them or we might not be able to, and because we are not going to impose those unilaterally as fall-back as contingency we've proposed that areas that remain unrestricted beyond a reasonable period of time or it appears that those restrictions will not be able to be affected that as a contingency we would propose that there be active cleanup on any property that could not be restricted.

Active cleanup by either plant-uptake if the study could show that would work or just by the excavation, particularly if we only have a small area remaining that needed to be addressed.

And that in a nutshell is five years of studies boiled down to a proposal that we'd like your comments on. And before I leave this I would be remiss if I didn't go on and say that I have appreciated working on this project, working here in Soda Springs hopefully being of some help.

I have gotten consistently excellent support from Bob Geddes and his team, we don't always have the same perspective on every issue but I think we've been able to work professionally together to

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make sure that we got the information necessary to make a good proposal here.

And before I close and hand it back to you all for comments and Misha to wrap the meeting up I just thought I would mention a question I used to ask the first time someone asked me for comments and that is, what sort of things are you asking for comments on?

And I just wanted to make it clear that it is not just, although it is simply the proposed plan as we mailed it out to you all -- I meant to wave this at everybody.

I think many of you received written proposed plans in the mail, about an 11 or 12 page document, we have more copies here. That goes into greater detail than I have this evening. Of course the five volumes of reports that go into greater detail they have more information available.

But we welcome comments on the proposed plan, the alternatives, the decisions we made not to do more on some things, the proposals we're making about doing something else, the studies that are out there or any local preferences that you want to make sure that we take into consideration in making our decision and implementing it in the future.

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So with that unless you have any questions for me, thank you, very much.

MISHA VAKOC: Thank you, Tim.

Thank you, Dean.

Are there any questions?

Yes, sir?

SID CELLAN: On your land restrictions now in the future will that expand at all? We own some land just directly west of Monsanto will that effect that in the future? I mean with your studies have they found that that will leach out farther or has it stopped?

TIM BRINCEFIELD: Right. If I understand your question is, is there any chance or likelihood that these areas that I've described that should be restricted would expand over time or that more property would be effected.

Based upon the information generated that we have available now we see no reason to believe that that would be the case. What appears to be the case is that the contamination that is there largely appears to be due to past practices.

Frankly Monsanto has progressively improved their air emission controls on the stacks, their dust controls and various other activities over

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the last 15 or 20 years based on studies I've seen and what I've seen personally such that it appears that they are emitting far less contamination than they ever did before.

And that therefore we do not expect the area to expand any more. In fact what we expect to see is that things would get no worse or in fact would decline over time even if we took no further action based on the proposals.

But part of the safety net that would be involved in this is that the monitoring program would show us if that wasn't the case. So I would be remiss if I didn't say conceivably if we were checking in at a later date and find that there was greater levels of contamination out here than we expected I would be back to work trying to figure out what was going on and trying to decide whether we made a mistake in judgment as to what was the situation and whether something else might be necessary.

But everything we have in terms of data and information suggests that should not be the case. We don't see any evidence that it should migrate, we don't see any evidence that things could get worse, we don't see evidence that they are

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re-contaminating at rates anywhere near what the past contamination puzzle was there. We are cautious but we would anticipate there wouldn't be anything more. Does that answer your question?

SID CELLAN: Yes.

COURT REPORTER: Excuse me, could you state your name?

SID CELLAN: Sid Cellan.

TIM JACKSON: On the groundwater alternative if you're going to be spending money monitoring for 30 years; is that right?

TIM BRINCEFIELD: Correct.

TIM JACKSON: Monsanto is going to be spending money monitoring?

TIM BRINCEFIELD: That's projected in this study. We always say out to 30 years, it's a general benchmark. In this case we have projections that we would think everything to recover by then so it's useful and that's not a hard and fast number.

TIM JACKSON: So it could be 5 to 30 years?

TIM BRINCEFIELD: We would anticipate the monitoring would continue until we've been able to prove that the groundwater has recovered and done so for a period of time where we're sure that we haven't

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missed something. At this point 30 years is a good working number.

TIM JACKSON: Could be as little as five years though, right?

TIM BRINCEFIELD: The 5 to 30 year figure is less uncertainty in the estimates than the fact that some of the constituents we expect to achieve them in as little as five.

Some are essentially are bound up in the soil underneath the facility and it would take a little longer to dilute frankly and therefore would be present longer. At this point that estimate is closer to 30 for some.

TIM JACKSON: And then on soil monitoring would that be monitored in the future as well?

TIM BRINCEFIELD: Soil the estimate that's used there is 30 years. And I'm under requirement by the law to continue to evaluate the Site every five years if we leave anything in place that's potentially hazardous.

These proposals would leave material that you could construe as possibly hazardous and therefore we would be back periodically until we could say we didn't need to any longer.

TIM JACKSON: Is that where most of the

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costs are coming from for Monsanto?

TIM BRINCEFIELD: The costs break out very differently. The example -- the closest cost that's in the feasibility study and what's proposed here would be for their preferred alternative which would cost them about two and a half million dollars.

I'm going to do this off the top of my head but about a half million dollars of that are kind of up-front costs to establish controls and do initial work. And then the rest of it is kind of the costs of about $150,000 a year for continued dust control, which they say they're going to do anyway, continued monitoring which also Monsanto -- and honestly Monsanto has said that even if EPA does not require them to do so they will continue to do dust control, they will continue to do air emission control, they will continue to do groundwater monitoring, they will continue even, they've said, to do soil monitoring.

TIM JACKSON: And 2.5 million dollars is the total cost?

TIM BRINCEFIELD: That's the estimated cost of the feasibility study of 30 years of the alternative of close to what I've described here, again that includes that dust control.

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TIM JACKSON: One further question then for Monsanto people, how does this affect your profit margin? Is this a lot of money for you guys to have to spend on this stuff or is it a little money? How does it fit into the scheme of things business wise?

BOB GEDDES: Tim, that's a hard question to answer exactly because Monsanto looks at environmental stewardship as just a part of the costs of doing business. So it doesn't matter if it's a lot or a little, if it's the right thing to do Monsanto is committed to do it. And we believe for sure that it is the right thing to do.

TIM JACKSON: Thanks.

TIM BRINCEFIELD: Yes, sir?

ROBERT GUNNELL: I'm Robert Gunnell. You indicated that there are possible restrictions going to be put on the surrounding land for residential purposes. Will those same restrictions apply to industrial or commercial applications if you're -- facilities such as that adjacent to the plant?

TIM BRINCEFIELD: We would not propose that. Again back to the risk assessment and we try to conservatively estimate potential risks. So when we look at residential exposure we assume a family is there for 365 days a year for long periods of time

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potentially 24 hours a day, children playing in the dirt.

We also look at industrial exposure, eight hours a day, less frequently a year. We look and see whether that less frequent exposure would also pose a risk.

And our assessment was that less frequent exposure such as industrial use, such as agricultural uses, recreational uses even, would not be expected to pose an unacceptable risk. We would not expect to be restricting those uses. The only proposal that we're making is to restrict residential use.

ROBERT GUNNELL: One other question.

BOB GEDDES: If I could just add a little bit to what Tim said, Monsanto does own a lot of property that's not really considered to be industrial property, for example the old Kackley farm. We own some farm land that's on the plant site that Larry Hopkins farms, if you're familiar with the Monsanto operation.

If we ask other residents or landowners to restrict the development of their property Monsanto will impose that same restriction to those lands that are contaminated as what we would ask or expect anyone else to do.

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So to follow up on your answer a little bit, yes, we will restrict residential development in those lands that Monsanto currently owns that could be considered industrial.

ROBERT GUNNELL: My experience is that now days whenever there's a land transfer and banks want to have a level one or a level two environmental study done prior to the transfer of land before they're willing to lend. I assume that's somewhat the kind of study that's been going on right here now.

Is there a possibility if we were to want to sell that land that a bank would refuse to loan money because of the contamination that's there? Would they demand that it be cleaned up before they would loan any money to buy that property?

TIM BRINCEFIELD: I honestly cannot tell you, I do not know. I certainly can't speak for the banks. And I guess I would have to admit that that could be a potential concern for the affected areas but I really don't know.

ROBERT GUNNELL: Well, my experience is that on several transactions banks have reused to loan money because they're afraid that they might get involved in a Superfund cleanup or any type of

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cleanup that they might be responsible for.

TIM BRINCEFIELD: Again, I can understand that concern. It's not something that we're specifically recommending but it could come to pass, it's conceivable.

MISHA VAKOC: We could look into that though.

TIM BRINCEFIELD: We could certainly look into it and see if -- I can see why you need a specific answer to that but I don't have one here.

Excuse me, just procedurally I get ahead of myself, I don't do this often and I get nervous. I forgot to add would it help people if we repeated the questions? I'm jumping in and trying to answer things and realizing some folks are a little further back and I don't mean to be redundant but would it help?

I'm getting some nods from the back. I already tried to get you to move to these lovely seats in front and that didn't work.

The question here was whether these restrictions might cause a bank to refuse to grant a loan or to grant a loan for someone trying to transfer the property. And we will look into whether we would see that as being the case but I don't have

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any specific answer to that.

TIM JACKSON: Tim, when you say you'll look into that does that mean that will be stated in the final decision?

TIM BRINCEFIELD: Well, the final decision document, in our jargon a Record of Decision, and attached to that is what we call a responsiveness summary where we the agency summarize the comments and questions that we received in this meeting and whatever.

So this will go in there. Someone -- I'll probably say -- again, you know, quote your name and we'll say we were asked whether or not such restrictions would result in and we'll get the best answer we can at that time in that document.

We'll also do our best to get that information back to you directly. But we do not promise to give a personal response in writing to each person that's asked a question. If you want something like that, however, you let me know and you can get it. We don't make a blanket promise.

I answered again without repeating the question, I'm sorry.

The gentleman back here, was that Sid again?

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SID CELLAN: Yeah. Does Monsanto or do you guys have the area on our property that's contaminated to where we know what land is contaminated? I mean we can't really tell.

TIM BRINCEFIELD: The question is do we have or are we providing -- does Monsanto have the area of the Cellan property for example that's been affected by the contamination in detail here.

And I think my best answer is this is a rough representation taken from there. We have some Xerox copies of the detailed figure that I've kind of drawn all over here that shows in a little better detail the area here that we've identified as recommended for cleanup.

I have to be careful I didn't say much in this detail. Again what we found is the highest levels of contamination were right along the border here and slightly here and to a lesser degree some of these other areas.

When we took samples farther out we either found lower levels or no evidence of contamination. And depending on how stringent the cleanup level, we want to protect against any possible exposures, we could draw these lines a little farther out.

So you see if you could go to the

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feasibility study that there are lines drawn and that if you decided that a much less protective cleanup level you wouldn't draw any lines because you would say it's okay as it is.

If you wanted to protect against any possible exposure you might go somewhat farther out than here. So recognizing that the figure that we could give you here this evening is going to show this line is drawn because that's what we're proposing to deal with.

That's not to say that there's absolutely nothing an inch beyond that. That's to say that levels have dropped off. But all that said we could give you a figure, I can sit down with you or we can get these folks to do it in more detail to talk about what we found based on these various sample locations at various points and what we think the indications are.

BOB GEDDES: Sid, we'd be happy to share the data so that you can look at the numbers as we received them from the samples themselves.

DEAN PAHL: And I do have some copies so that if you or anybody wants to get a copy I would be happy to give it to you.

TIM BRINCEFIELD: I did a rough

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approximation even than this for the proposed plan document that's since been printed around. I hope that was informative and I apologize now if it has misrepresented the details in anyway. I apologize, I'm responsible for that.

But I hoped that the general figure would give people general information, these get into great detail but we can certainly provide that detail.

Now we've had a couple of questions up front. I believe first him, then you.

Your name first, please?

ROBERT ANDERSON: Robert Anderson. A couple of questions in this, in this looking at trying to get some land use restrictions, I think that's about as good a term as any on this, did you take a look at what restrictions or land use planning is now in the County ordinances in respect to this area?

Number two is assuming that you want those restrictions but you don't get total acceptance and compliance from the present landowners around there isn't that going to leave Monsanto and the County Government who has some responsibility for this in a somewhat gray and dangling area down the road 5, 30 years, whatever the case may be?

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TIM BRINCEFIELD: Well, first let me see if I can state your question back and make sure I try to answer the right question. And let's see I was focusing on the latter part, make sure I get this.

MISHA VAKOC: The first question was have you looked at the local County --

TIM BRINCEFIELD: Right. We looked at the local ordinances and then also if we don't get the land use restrictions could that leave the County and Monsanto and others in a problem later, leave them hanging, did I get it close to right with Misha's help?

ROBERT ANDERSON: Yes.

TIM BRINCEFIELD: The first thing we did look into both the City of Soda Springs and County zoning and there is nothing that frankly satisfies the State and EPA's concern because local ordinances frankly can change. And they are not as we look at permanent solutions and long-term solutions I cannot say that I, the EPA or the State could enforce them in the future.

And so if land use ordinances are there now but could be changed two weeks later that's not a permanent solution. Basically they could be changed by a local vote and that would potentially allow the

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situation to change.
So we have typically at other sites been reluctant to rely on zoning or local ordinances alone because they can be changed and because they cannot be enforced by the State or EPA as necessary.
It's plausible but it's something we prefer not to do. Therefore what has been used more typically is voluntarily getting owners to put restrictions on the land and to therefore agree that it would not be used for whatever reasons not allowed. So I hope does that answer the first part of the question?
ROBERT ANDERSON: Yes.
TIM BRINCEFIELD: And in terms of would it leave them hanging I did say we will recommend these use restrictions but as you may recall in our proposal EPA has recommended there be a contingency in place that says if down the road it appears that we can't get those restrictions put in place then EPA would recommend that we proceed to go ahead and actively clean up that land.
Because rather than leave it unrestricted, rather than leave this no action situation potentially of uncontrolled exposure and therefore potential risks we believe it's more prudent to

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proceed with the actual cleanup.
So rather than leaving it hanging indefinitely I would be forced to step in and say everyone has made a good effort, it appears for whatever reason this can't be done and therefore it's prudent to move forward and just clean it up. That's the proposal we're putting out today.
Does that address your questions?
ROBERT ANDERSON: Yes.
TIM BRINCEFIELD: Thank you.
This gentleman here and then I'll come back to you.
CLARKE BROWN: My name's Clarke Brown. I own land to the east of the Monsanto plant on the north end in that area. So I gather that EPA or Monsanto would not be concerned if I were to drill a culinary well in that area?
TIM BRINCEFIELD: No. Well, I've got the soils map up but the direction of groundwater flow is generally this way. The sources of contamination that were addressed but there are still residuals are again in this corner moving here.
There's other groundwater that comes in from the north and that's why even here where the Monsanto production well -- these surface wells are

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not effecting the groundwater in any way that we can tell. What effected the groundwater were the old leaking hydroclarifier that have been taken out of service.
So groundwater -- that's why when I talk about groundwater use restrictions it would only be with respect to the affected areas to the south.
Does that address your question?
CLARKE BROWN: Yeah.
TIM BRINCEFIELD: Tim then?
TIM JACKSON: I may be thinking too far ahead here but if some landowners don't go for these voluntary restrictions it seems to me that rather than go to the expense of cleaning up the soils or bioremediating or whatever it seems like Monsanto might say to themselves gee, it might be better if we just bought this land from these people and give them a good deal on it. Is that a conceivable notion?
TIM BRINCEFIELD: EPA typically -- I'm going to answer this question indirectly because it helps me slightly to do a little background.
Typically again just as we look to Monsanto as a potentially responsible party in this situation, potentially, to do the studies given that we've established that contamination of concern here

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the sources appear to lie with the facility we would expect to go back and say we believe that you should bear a responsibility for the actions that are taking.
In fact whatever decision that we ultimately make the next step after selecting a decision and giving you all public notice of that will be then to proceed to go and give notice to Monsanto and if we were to identify any other potential responsible parties any others that we wish to enter into negotiations for them to perform the actions that are necessary.
So we would be putting a responsibility on Monsanto to make sure that those land use restrictions were placed on land. To the extent they own land they can put those restrictions on themselves. So for land that they already own they've indicated a willingness to do so.
If there were lands that they did not own that did not have those then one option would be in fact for them to own that land and to establish the restrictions themselves.
BOB GEDDES: Tim, can I jump in?
Monsanto has had in place a buffer zone acquisition program for many years. We have tried to

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purchase land as that land became available in close proximity to our property boundaries. And that program was put into place to avoid exactly this situation, residential encroachment close to the property line.

So Monsanto is interested in that. We have tried not to put pressure on local landowners, we have tried to negotiate in good faith with them. If they wanted to sell their land then Monsanto was eager to negotiate with those and in many cases we have purchased the land. That's how the lands that are identified outside of the plant property have been acquired.

TIM JACKSON: Well, I'm not a real estate expert but it seems like a landowner could use Superfund as a bargaining chip to get more money for their land, is that accurate, Bob? Do you think that's possible?

BOB GEDDES: Yeah, I suppose that would be an alternative for a landowner. Hopefully we can negotiate fair market value prices and work closely with those people as that opportunity presents itself.

Obviously we would be reluctant to pay exorbitant prices for something we didn't feel was

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fair.

TIM BRINCEFIELD: Other questions?

DEAN WELLING: I'm Dean Welling. I'll build on this gentleman's question here with respect to the contingency option.

Have you all considered if landowners do not want to place land restrictions on their property, the majority of these properties surrounding the plant is like you stated nonresidential, agricultural, pasture land that kind of stuff, is there an option than rather than mandating cleanup if they don't want to go into the restrictions that you suggest as doing that on an as need type basis?

TIM BRINCEFIELD: So your question, to make sure I understand you, is that if someone did not want to place restrictions on their land would it be an option for them to essentially not have restrictions and only deal with the issue if they tried to change the land use?

DEAN WELLING: That's correct.

TIM BRINCEFIELD: Is that right?

DEAN WELLING: If for some reason ten years down the road they wanted to build a house there then Monsanto would have to come in and do

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something.

TIM BRINCEFIELD: That alternative was not specifically evaluated here. It could have been considered and could be reconsidered.

We would -- having been at this for six years myself there is some preference for dealing with the situation and being able to move on. Most of us would simply like to get this behind us and be able to reach the point where this could be resolved.

So that's the biggest concern that I have with the wait and deal with it at a later date option is this just that, it does leave you hanging. It leaves uncontrolled property where potentially there could be unrestricted exposure. It requires us to more actively pay attention to make sure that that isn't happening.

And so it could be considered and is an option but that's part of why it wasn't necessarily --

DEAN WELLING: Could it have some cost advantages to Monsanto?

TIM BRINCEFIELD: It could. You know it's a possibility and we can certainly give it some more consideration.

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BILL WRIGHT: Tim, this is Bill Wright. I'd just like to clarify wouldn't it be fair to say that this gentleman's question and suggested approach is not inconsistent with the proposed plan? Wouldn't be that be a fair characterization?

TIM BRINCEFIELD: Well, the only part -- I guess I would say it feels slightly inconsistent in that I've laid out that we think that if we don't get restrictions in a reasonable time we should move on and clean it up in order to provide some closure.

It feels like it differs to me in that it seems like you're suggesting land use restrictions or a commitment to test -- the way I would put it, tests and if necessary disposing of the soils in accordance with the plan at a later date is more how I would describe this. It seems slightly different from what I've proposed right now.

DEAN WELLING: What does EPA consider as a reasonable period of time?

TIM BRINCEFIELD: That is something that is deliberately not specified there in part due to solicit comment and in part because I'm trying to maintain some flexibility.

And our own thinking it seems that it's conceivable that these use restrictions could be

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resolved in a fairly brief period of time, perhaps a year. But I'm concerned that frankly if I have to specify a year and I get to day 364 everything's all but done and I got to go woops, had a year and I now have to move on to the next thing. These things are pretty rigid.

So in order to allow us the flexibility and allow me the flexibility to make judgments as we go along we've left this as recommendation for a reasonable period of time to be determined by EPA.

Options here would include being more specific and setting out a particular amount of time or leaving it totally open. I chose sort of the middle ground to indicate that we did not think it should go on indefinitely.

Does that answer your question?

DEAN WELLING: Well. . .

TIM BRINCEFIELD: Do you want to follow up on that or should I go on to this gentleman?

DEAN WELLING: You gave me a non-answer really on what a reasonable time frame was. I still don't know whether it's a year, is it 20 years? Is it 30 years at the end of this final 30 year possibility?

It seems like that could have a lot of

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ramifications as to what stems or what action plan would need to be put in place from either Monsanto's standpoint or the landowners from the standpoint of how to approach the situation.

TIM BRINCEFIELD: Typically the time frames on other sorts of cleanup actions that I have been more involved with -- let's say if we were just focusing on if I were recommending that we selected the excavation option there would be some time necessary first to negotiate this consent agreement that I talked about, the agreement where Monsanto or if they're willing to agree to do the work.

Incorporated in that we typically then have work plans, spend time in design what needs to be done and all of that takes some time. And that's one of the reasons we say it's hard to estimate exactly how long it would take.

In this case it's not -- there's very little that would need to be done in terms of a work plan that would need to be developed. It really comes down to can people come to a decision to do this and move on.

And so there's no -- I have no engineering time scale to put out here. And so reasonable here is a judgment call. If people would be more

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comfortable and believe it's important to have a specific time frame we'll consider that. But the specific time frame has it's, in my opinion, advantages and disadvantages.

And I would be interested in hearing more people's thoughts about whether they felt it's important to have a specific time frame and if so should it be short or long. But I pretty much told you as much as I think I can as to where my thinking is.

Still have a question here?

BRUCE PALLANTE: Yes my name is Bruce Pallante. I'm a little confused because this proposal was the only risk is if there's residential building?

TIM BRINCEFIELD: Correct.

BRUCE PALANTE: And if there is none there now there is no risks so I think what he's saying is let's not clean up until there's a risk or a change in land use. And your concern was you want to move on, you may not pay attention to this if we let linger.

But I thought I heard you say you're going to monitor for 30 years and have five year periodic reviews anyway so how are you going to forget about

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this?

TIM BRINCEFIELD: Not forget about it but the level of effort, the level of review, the type of review would be somewhat different.

It's not that we could not do so but that is one of the concerns in doing it. And there's also to reach closure for people here. And it's that we believe that prohibition on residential use would be protective and allow some certainty for landowners and for Monsanto.

What you've offered would also be protective and is a plausible alternative. It just in our minds did not offer some of the same advantages. It's not to mean that it could not be considered. It's just there are some practical implications there as well.

But I'll honestly based on the comments I'm hearing this evening here give it some more consideration.

BRUCE PALLANTE: It may have advantages to the landowners and to Monsanto.

TIM BRINCEFIELD: It could, there may indeed, it's not inconceivable. You know I would anticipate that again in order for that to be protective and in EPA's judgment enforceable, because

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that's part of the concern about local land use controls, I can't enforce those.

The local -- someone locally tries to -- decides to change those and allow residences before it I have to come back in and take a new federal enforcement action and basically do a lot more procedural action to stop something that otherwise might have been stopped up front.

So here in order to effectively accomplish what was suggested here what we would typically require is that instead of a restriction on your property being placed that said no residential development be placed here we would ask that a voluntary restriction be placed on the same piece of property that said no residential development shall occur here without proper testing and if necessary disposal of the soils.

And just to recognize again that I could not responsively say well a gentlemen's agreement to this effect will be okay. If we were to go forward with the proposal you describe it could be done, it could be considered, that's the form that I would have to recommend it take.

That's the only point I wanted to clarify is that we would ask to do it in a similar way. But

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that is a potential way of doing this. And that could be considered.

Mark?

MARK STEELE: Yes. I'm Mark Steele and I've got a couple of questions. How many acres are you talking about outside of Monsanto? How many property owners involved and can EPA force cleanup on private property?

TIM BRINCEFIELD: How many acres, the proposal here I've kind of drawn a line between the two more precise figures in there and I split the difference inaccurately and I'll let Dean improve on it.

They looked at something that was either 235 acres or 435 acres. And so my ball-park is that this is about 335 or 350 acres that's within these blue lines.

DEAN PAHL: 250.

TIM BRINCEFIELD: Excuse me, a more precise estimate would be more like 250 acres. And I would trust his figures better than my ball-park on this. And that's the first question is how many acres and the second was?

MARK STEELE: How many property owners?

TIM BRINCEFIELD: How many property

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owners. I sent letters to 11 property owners that I identified as potentially affected, those included Kerr-McGee to the east which is potentially affected. But also included owners of property to the north and west.

Basically anyone that -- any property owners that I identified including the City of Soda Springs since they own the industrial park that is potentially affected here. I sent letters to -- hopefully those people got it in an effort to make sure that people that could be affected by this understood what was going on.

And the last part of your question was could, if I remember, EPA force cleanup of the affected areas on private property; is that correct?

MARK STEELE: That's correct.

TIM BRINCEFIELD: I think the short answer is we probably could under certain circumstances. Under these circumstances at this point we believe that the restriction of use option would be protective and that's what we're recommending.

But if cleanup were the selected remedy and property owners would resist I don't think we would force cleanup but that would probably mean there would be a need for restrictions. This is all

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subject to what is finally decided in the plan.

MARK STEELE: Thank you.

DEAN PAHL: Let me just add one thing from the first part of the question about the amount. If you'll see all those dots are all locations where one to five samples were taken.

The area that I had and Tim has here in green for the soils it's interpolated is the word. Everything else was definitely, absolutely clean. The samples within are the only ones so you kind of draw a space in between.

Frankly that's conservative, I can't say for certain that everything is affected within this. It's a mathematical estimate. We know everything outside it is clean and within it I can't say for certain. For example that may be high but it's about 250 acres.

TIM BRINCEFIELD: If we move forward on an active cleanup option again the first step would be to build on the studies here to develop a more precise work plan which would include some more precise sampling or some additional sampling to make sure that we had a precise handle on the affected areas as possible that we target for cleanup appropriately.

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In some few cases that means we end up looking at a wider area. In most cases it means we are able to narrow it.

Did I see a question at the back?

STEVE HANESS: My name is Steve Haness, I'm with the U.S. Public Health Service. Regarding the comments about waiting ten years to see whether or not land uses change, things like that.

I don't think it's a given that if we wait ten years then have to do cleanup actions that that would be more cost effective for Monsanto or the EPA or the taxpayers or anybody.

I think that if we look at certain trends in the environmental industry over the last ten years we're likely to see that cleanups have grown more and more expensive. So I wouldn't just accept the fact that we wait until we see whether or not land use changes.

I'm not saying that it will be more expensive, I'm just saying that I think there's a lot of uncertainty there regarding whether or not that would be more cost effective or a better option for Monsanto or EPA or anybody else.

TIM BRINCEFIELD: I need to go back and probably have gone far off the reservation to

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qualify, Mark, in terms of your question concerning compelling landowners to clean up. There are -- it would be a very, very -- have to be very, very specific situation and I'm not saying it would necessarily apply here.

I believe that I'd have to check with lots of lawyers before I say a whole lot. I have no doubt in my mind that we believe that it's important to add these restrictions and we would work with landowners to make sure that the situation was protected.

But under what circumstances cleanup can be compelled probably varies with the instance. And I've wandered off up here.

BILL WRIGHT: Tim, this is Bill Wright. There's been discussion about these being potential future risks to potential hypothetical future residents and actually I have a question perhaps for members of the audience.

It seems like we have several property owners in the audience and I know that EPA's risk assessment and Monsanto's risk assessment neither one of them evaluated what the potential was for future residential development of the property within the green. But the people who own the property perhaps they could give us an estimate of what that

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likelihood is.

TIM BRINCEFIELD: I think Bill's question is whether or not you the residents of this affected area could or would like to give us an estimate as to the likelihood of your wanting to or actually developing that property for residential uses.

Bill is correct that I have been reluctant and remain reluctant to say that I can predict the future accurately enough that I would begin to estimate that likelihood. All I've said is that it is a possibility and we don't believe that that should occur.

But I will leave it open if there's anyone here that wishes to address Bill's question and help us understand that, that certainly is information you are in a better position to have in Soda Springs than I am.

ROBERT GUNNELL: I'll respond partly to that. Some of our land has been in the land reserve program which will run out in about one year or maybe two, I'm not sure which. But obviously we're going to make the decision what to do with that land in the next year.

Whether we go back and turn it into farm ground and if what I heard you saying tonight we

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could probably take a plow in there and turn the ground over and farm it and it wouldn't be any problem.

But if we decide to do something else with that land Monsanto's operation could cause restrictions what we might be able to do there.

TIM BRINCEFIELD: At least in terms of residential use, yeah, that would be our protection.

ROBERT GUNNELL: But we don't know. Within the next year or two we're going to have to decide.

TIM BRINCEFIELD: Other questions? Gentleman in the back there?

MORRIS COLE: I've got one.

TIM BRINCEFIELD: Your name first, please?

MORRIS COLE: Morris Cole. I've got a question when you talk about risks, what's the number you're comparing to? I think everybody's here because you say risks and you tell them cancer and all these other things, what are you comparing it to? What's the risk factor we're looking at here? I don't think anybody understands that.

TIM BRINCEFIELD: In other words if I say the number like I say one in a million risk of

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getting cancer is that the sort of thing you're asking?
MORRIS COLE: Yeah.
TIM BRINCEFIELD: Okay. In this case and that's a number that will help you get the distinction. I talked about a Superfund acceptable risk range and that's what I was just saying when we look at things, things that would be projected to pose less than a one in a million chance of excess or additional cancers we take off the table. We look at things that are potentially more than that.
And in this we actually kind of look at a range between one in a million and 1 in 10,000 and anywhere within that we may see the need to take action. And if the risk is higher than that, if the chance is more than 1 in 10,000 of some sort of -- in this case potentially excess cancer are very high we clearly move forward.
In this case the potential risks in all cases were somewhere in that middle ground. Again the current risks were off the scale, well below it.
But the potential risks if we assume someone were living there was as high as about 3 in 10,000, so right at the border line top of where we clearly move forward and look at taking action. That

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would be the potential risk number if that helps answer it.
But again that would only be the risk in the event there's residences there and those kinds of exposures we described. Does that --
MORRIS COLE: I don't think a landowner can answer the question you're asking them until you tell them what the risk factor is, what that number is.
TIM BRINCEFIELD: Within this blue area I'm saying that that factor is somewhere on the order of 3 in 10,000, we think that's a conservative estimate. We actually believe the risk is less than that but it could be as high as that if someone were to build a home there.
And another way that that gets translated and I'm bastardizing this a little but it's how I try to understand it is that if you had that 3 in 10,000 if you had 10,000 people living in this -- inside the blue area we would estimate that after 30 years we would see 3 extra cases of cancer in those 10,000 people.
That's above the 1 out of 4 chance that each of us as a resident of the United States has. So there's this big chance -- and again Soda Springs

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is better than average, one of the things that's been pointed out to me by Monsanto is that the incidence of cancer here is well below the average.
But I use the national average to compare is one in four. What we're saying is that this contamination could potentially add 3 out of 10,000 to that 1 in 4 if 10,000 people were exposed. It's not quite that linear a relationship but I hope that gives some --
MORRIS COLE: That's what I as a landowner would probably want to know is, is what are my risks.
TIM BRINCEFIELD: I mean there's a lot more on that but I hope that helps a little. I could spend more time on that with anybody individually or on this now if that helps. And we have those numbers in detail and we can translate those numbers in detail based on what's in the studies.
PAT HYLAND: Monsanto did a parallel risk assessment, could I ask Dean to address Monsanto's findings on the risk assessment the parallel?
DEAN PAHL: Sure. Actually Bill was the primary investigator.
PAT HYLAND: Bill would be the one since he did it.

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BILL WRIGHT: It seems like the scenario that is of most interest -- excuse me, can you please highlight that area up by S-12? Thanks, Tim.
MISHA VAKOC: Excuse me, could you please stand up?
BILL WRIGHT: Yes.
EPA did an assessment of that area which was the most contaminated area at the highest levels of Radium was right to the north of the plant fence line. And if someone were to build a house there in the future EPA estimated the risk to be two times ten to the minus three or about two in one thousand. Again the EPA action level that's about ten times above the EPA action level.
We took -- we did a state of the art risk assessment of the sort that is -- it's gotten acceptance in some EPA regions, it hasn't been accepted in the Seattle region yet.
But we looked at it probabilistically and we've estimated that yes it is possible that risks on the order of 3 times ten to the minus four, which is EPA's chosen cleanup level for this project, are possible. However the likelihood of exceeding those is less than -- well, it's approximately .05 percent.

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In other words if someone were to move, build a residence up there some point in the future there's approximately a .05 percent chance that the risks would be unacceptable according to Superfund law.

TIM BRINCEFIELD: Two things if I may add to that. One, Bill has correctly corrected me, the maximum potential risk was in fact as high as 3 in 1,000 one or 2 in 1,000, so even slightly higher than I stated.

Secondly as he said Monsanto did do this additional risk assessment. The EPA reviewed this assessment, we do not agree completely with some of the assumptions going in. And I think the simplest way of saying is that part of that assessment as we understand it is Monsanto assessed the probability that someone would in fact build a home there. And given that that --

BILL WRIGHT: No, we assumed that someone would build a home there just as EPA assumed that someone would build a home there.

TIM BRINCEFIELD: Okay. I will stop there and not comment on what they did other than to say it's not been fully accepted by EPA, it is not fully adopted by EPA, it is not fully conforming with what

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the other EPA regions have accepted, EPA has not approved the document and we do not believe it is prudent to use for decision making in this case.

We are relying upon the EPA risk assessment. There is useful information in their document which we are also using.

MISHA VAKOC: Are there any other additional questions or comments? We are running a bit over time, our agenda suggests that we might be wrapping up around 8:30, I know that it is past 8:30. We can continue if you like. Are there any other statements people would like to make or questions?

TIM BRINCEFIELD: We've taken most of questions and we will take these down with the help of our reporter and treat them all as questions slash comments for the record. But if anyone wanted to make additional formal comments or had been planning on making one and we didn't give them a chance certainly please, this is an opportunity to do so.

If you feel like your comments and concerns are not already on the record please do so now or send them to us, call me or I'll stick around after this for a while, I've obviously run on quite a bit here.

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MISHA VAKOC: Okay. Any other additional questions?

BOB GEDDES: Misha?

MISHA VAKOC: Yes?

BOB GEDDES: If I could I'd just like to reiterate our invitation. A lot of what you've heard tonight isn't what you would call every day common Soda Springs language.

If you still have questions, which I'm sure most of you do, we would love to come and help you understand as much as we possibly can to make sure that it's clear in your minds that the conditions and circumstances that we're dealing with as citizens of this community and especially those who own property in close proximity to the Monsanto facility.

So give us an opportunity if you choose to come and help you understand any questions that you may have.

MISHA VAKOC: Yes?

DEAN WELLING: How, when and who is going to make this decision?

TIM BRINCEFIELD: How and who will make the decision and when I think I heard there.

As project manager I'll be responsible for

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with help from Misha and other people pulling together the comments and responses to them and trying to then make a recommendation to my upper management in consultation with the State.

And the decision maker will be handled in our regional office is ultimately our regional administrator Mr. Chuck Clark, he's the one that will sign it. He will take into consideration the work that's been done, the proposed plan, the comments on it and the recommendations and analysis that we make.

But it is not my decision, it is Chuck Clark's decision to make. But I'm kind of the primary conduit so I appreciate any help I can get in terms of informing as to what people's comments and concerns are.

DEAN WELLING: What's the timing?

TIM BRINCEFIELD: The timing on that, at the moment the schedule if it goes forward is when the comment period would end on August 30th and could have a Record of Decision completed, depending on what comments we receive, these tonight and any others, as early as the end of September.

I can't see it happening any earlier than that and it could conceivably take a little longer.

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If -- if the proposal that I described in the document and this evening were to go forward and obviously I've got a lot of good comments and questions that would cause us to keep looking hard at that.

Were that to go forward a decision would be made and make sure it's announced. We would then send the notification letters to the responsible parties, such as Monsanto, inviting them to negotiate an actual plan to implement whatever is decided. And again that might happen say over the winter.

And I think the other way -- I wish I had answered the question before about the cleanup because I'm trying to give the most accurate answer possible. When we have a potentially responsible party such as Monsanto and cleanup is likely we then give notice and we say we want to implement this and we want to ask you to implement it.

They're given an opportunity to step forward and say yes, we will do the cleanup under EPA oversight. If they refuse to do so EPA then has the option of unilaterally ordering them to do so and to do so under penalty of law. Or EPA can step in and do the work itself and seek to recover the costs from the responsible party.

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Landowners that haven't been identified as responsible parties are in a somewhat different position. Obviously I can't tell you you're responsible and you've got to clean it up, if you haven't been identified as a responsible party you're not responsible for it.

So you're in somewhat different situation so I think even my earlier answer was a little off base and I'll try to backtrack a little and try to get it -- make sure it's right. The circumstances for the landowners are a little different, we want to see that the work gets done.

But with respect to Monsanto land is where I can give the clear answer with respect to their property by notifying them as a potentially responsible party I give them the choice of doing what is required by law, do so under the penalty of order or we will do it and seek to recover the costs.

And that's really the most accurate answer for that and that does not apply precisely for property owners who are in a different situation.

That's the last I'll volunteer unless anyone else has any questions or comments.

Thank you all very much.

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MISHA VAKOC: We will be here for a few minutes if you would like to talk to Bob Geddes or someone else, please do.

(Hearing concluded.)

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REPORTER'S AFFIDAVIT

STATE OF IDAHO)
) ss.
County of Caribou)

I, LANCE D. OVIATT, do hereby certify that I am a Certified Shorthand Reporter in the State of Idaho, and the Reporter who served as the Official Court Reporter of the proceedings had at the Public Hearing at the time, place, and hour heretofore given, and that the foregoing consisting of pages 1 through 84 contains a full, true, and correct transcript of the proceedings had at such hearing as reported by me to the best of my knowledge and ability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this the 22nd day of August 1996.

(Signature)

Lance D. Oviatt, C.S.R. #658
and Notary Public in and for
the State of Idaho.

(Seal)

My commission expires: 12/99